

Marine and Coastal Protected Areas: A Guide For Planners and Managers

Rodney V. Salm

assisted by

John R. Clark

based on

The Workshops on Managing Coastal and Marine Protected Areas

World Congress on National Parks, Bali, Indonesia, October 1982

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World Congress on National Parks, Bali, Indonesia, October 1982

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Open seas: Maxine McCloskey

Polar seas: James N. Barnes and M. Norderhaug

Island habitats: Peter Ogilvie and Nigel Wace

Protected areas in social and economic development: Ivor Jackson and
Rodney Salm

Foreword

Most people think of mountains, forests, and wild animals when they think of national parks, but about 1,200 parks and reserves also protect coastal and marine habitats. Still, the coastal zone is very densely populated and is taking quite a beating at the hands of humanity—by pollution, major development projects, land reclamation, and overuse.

Because coastal zones and adjacent marine habitats are potentially the sites of extreme resource conflicts, the Law of the Sea treaty was established to provide a rational and objective basis for allocating resources. Article 192(5) of the treaty says that “states have the obligation to protect and preserve the marine environment.” This article not only provides a legal framework for preserving coastal and marine ecosystems, but also suggests that nations will be giving increasing attention to conserving coastal and marine living resources.

But this field of conservation is relatively new, and countries just beginning coastal and marine conservation efforts will need all the tools that are available. The methods developed over the past century for managing terrestrial protected areas cannot always be applied easily to coastal and marine areas because their ecosystems are so open, difficult to demarcate, and economically important.

To provide managers of protected areas in aquatic habitats with improved management principles, the International Union for Conservation of Nature and Natural Resources (IUCN) held a number of workshops at the World Congress on National Parks in Bali, Indonesia (11 to 22 October 1982). These workshops addressed many of the topics central to identifying, promoting, establishing, and managing coastal and marine protected areas.

Discussions at the workshops, however, indicated that even the many outstanding papers presented did not provide the manual of principles and guidelines we had envisaged when we planned the workshops. We therefore asked Dr. Rodney Salm, a highly qualified marine biologist working for the IUCN and the World Wildlife Fund in Indonesia, to assume responsibility for turning the workshop papers and discussions into a coherent and complete manuscript. This task involved far more than mere editing; it required considerable additional thought, research, and organization, to which John R. Clark, a coastal zone management expert from the U.S. National Park Service, also contributed his considerable expertise.

We are delighted with the book Rod and John have produced, which far exceeds our expectations when we planned the Bali workshops. It should help guide conservation efforts in coastal and marine habitats over the next decade. We will ensure that all managers of coastal and marine protected areas are provided copies of this book, and we hope that they will be able to apply its principles and guidelines.

It may be worthwhile to convene a major international meeting on managing coastal and marine protected areas toward the end of this decade.

We hope that this book will stimulate major new efforts in establishing and managing protected areas in the coastal zone and at sea. We will do whatever possible to ensure that all elements of the IUCN—its Secretariat, members, and commissions of scientists and managers—are fully involved in promoting more effective management of coastal and marine habitats. Our work will be greatly helped by this important contribution by Rod Salm, John Clark, and the many participants at the Bali workshop.

Kenton R. Miller, Director General
Jeffrey A. McNeely, Programme Director
International Union for Conservation of Nature
and Natural Resources
Gland, Switzerland
1 July 1984

Preface

This book developed from the Workshop on Managing Coastal and Marine Protected Areas, held in October 1982 during the World Congress on National Parks in Bali, Indonesia. It is intended as a guide for the increasing number of people who find themselves with mandates to plan either national systems of marine and coastal protected areas or individual sites. Readers are presumed to have training in the field of natural resources.

To facilitate its use as a sourcebook, the book is arranged in three parts. The first introduces protected areas as one of many tools for managing coastal and marine resources and outlines a process for planning a regional or national system of protected areas. The second part considers the specific principles and techniques for planning and managing protected areas in different environments. The third part offers a number of tools and case studies to help protected area planners and managers carry out their tasks.

This book relies on a variety of sources, including workshop papers, summary reports of workshop sessions prepared by session chairmen and rapporteurs, and submitted records of workshop discussions. Each participant in the workshop has thus contributed to this book. Later contributions and materials located after the workshop have been incorporated throughout. In the search for supplementary materials, it soon became apparent that there are few publications on planning and managing marine and coastal protected areas. In this new and evolving field there are few tested practical tools, and thus there is little to publish. As a result, I have drawn heavily on my own experience, and the book admittedly displays a strong bias toward my own style of planning protected areas.

In selecting materials, I favoured those that emphasised practical application. Often a workshop paper served as virtually the sole source for an entire subsection, like the papers

by Angel (open seas), de Klemm and Navid (law), Gardner (institutional arrangements), Odum (estuaries), Wace (islands), and Young (polar regions). Summary reports of particular value were those by Barnes and Norderhaug (polar seas), Carr and Jin-Eong (estuaries), Foster and Kenchington (planning), Kelleher and Lausche (law), Kelleher and Van 't Hof (management), Kenchington and Alcala (coral reefs), McCloskey (open seas), and Ogilvie and Wace (islands).

It is my pleasure to acknowledge the value of all the contributions mentioned above, the help of Ivor Jackson, co-convenor of the workshop, and the contributions of all the leaders and rapporteurs of the workshop sessions. I owe special thanks for the much-needed support and encouragement of Jeffrey A. McNeely (Programme Director, International Union for Conservation of Nature and Natural Resources), Graeme Kelleher (Chairman, Great Barrier Reef Marine Park Authority), and Nancy Foster (Director, U.S. National Marine Sanctuary Programs). Patricia Berjak and Norman Pammenter (Department of Biological Sciences, University of Natal) contributed photographs and took me to two protected coastal sites. Dr. Foster also made the facilities of her office in the United States available, including the assistance of members of her staff, particularly Carroll Curtis, who supervised the production of all graphics, and John Epting, who commented in detail on the book.

The International Union for Conservation of Nature and Natural Resources (IUCN) was supported in producing and publishing this book by the United Nations Environment Programme, the Sanctuary Programs Division of the U.S. National Oceanic and Atmospheric Administration, the World Wildlife Fund-U.S., and the National Park Service of the U.S. Department of Interior, whose Chief of International Affairs, Robert Milne, enthusiastically carried the project to conclusion.

Three people helped most to bring this book together: Jeffrey McNeely, John Clark, and Sue Rallo. Without their efforts, it is doubtful that this book would have reached the press. In addition to editing all the workshop papers, Jeffrey McNeely was the driving force behind publishing this book. My collaborator, John Clark supplemented, and rearranged the text to create a more focused and usable document. Ann Covalt diligently edited the entire text and tended to many design details. Sue Rallo (IUCN), exhibiting remarkable patience and endurance, worked extraordinary hours at the word processor to manage the sequence of drafts while keeping track of all.

Finally, with great sincerity I thank Susan Salm, my wife, who tolerated my months of reclusiveness with remarkable forbearance, and who helped make the text more intelligible.

Rodney V. Salm
Bogor, Indonesia
May 1984

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